Global Weather this week – updated 7 June 2016

Description

We might be seeing some heavy showers and thunderstorms here in the UK today, but the weather in other parts of the world is much more volatile with storms, floods and heatwaves.

North America

In North America Tropical Storm Colin affected northern Florida overnight. The storm brought over 100 mm of rainfall in places and winds of over 50 mph. This has led to fallen trees, power outages and some flooding. Colin is now heading out into the Atlantic and as it moves north-eastwards some heavy rain is likely to affect parts of the eastern United States and possibly Canada over the next day or two. Colin will then become a post-tropical system as it moves into the north Atlantic later this week.

Europe

It continues unsettled across large parts of continental Europe for the next few days. Whilst the flooding in Paris has captured the headlines, parts of Austria, Belgium, Germany, The Netherlands, Romania and Poland have also suffered from severe thunderstorms and flooding in the past couple of days, with Uccle in Belgium seeing over 75 mm of rainfall in 24 hours.

The most intense thunderstorms, focussed across central and eastern parts of France, Belgium, western Germany, Switzerland and northern Italy, may produce as much as 100mm in 3 hours or less, along with large hail and strong winds. This has led to a number of yellow and amber severe weather warnings on MeteoAlarm.

The River Seine in Paris reached its highest level for 30 years on Saturday at 6.1m, and with further heavy rain possible this week, it could take many days before it returns to normal levels.

Australasia

Darwin and the Northern Territories, in northern Australia, have seen record breaking temperatures. It is unseasonably hot with temperatures around 5C higher than average and temperatures in Darwin on Saturday reached 36.1C, above the June record of 34.9C. It's thought the spell of hot weather could be partly due to the recent very poor rainy season that has left the ground much drier than usual and may persist for a while meaning health, power supply and water provision may be impacted.

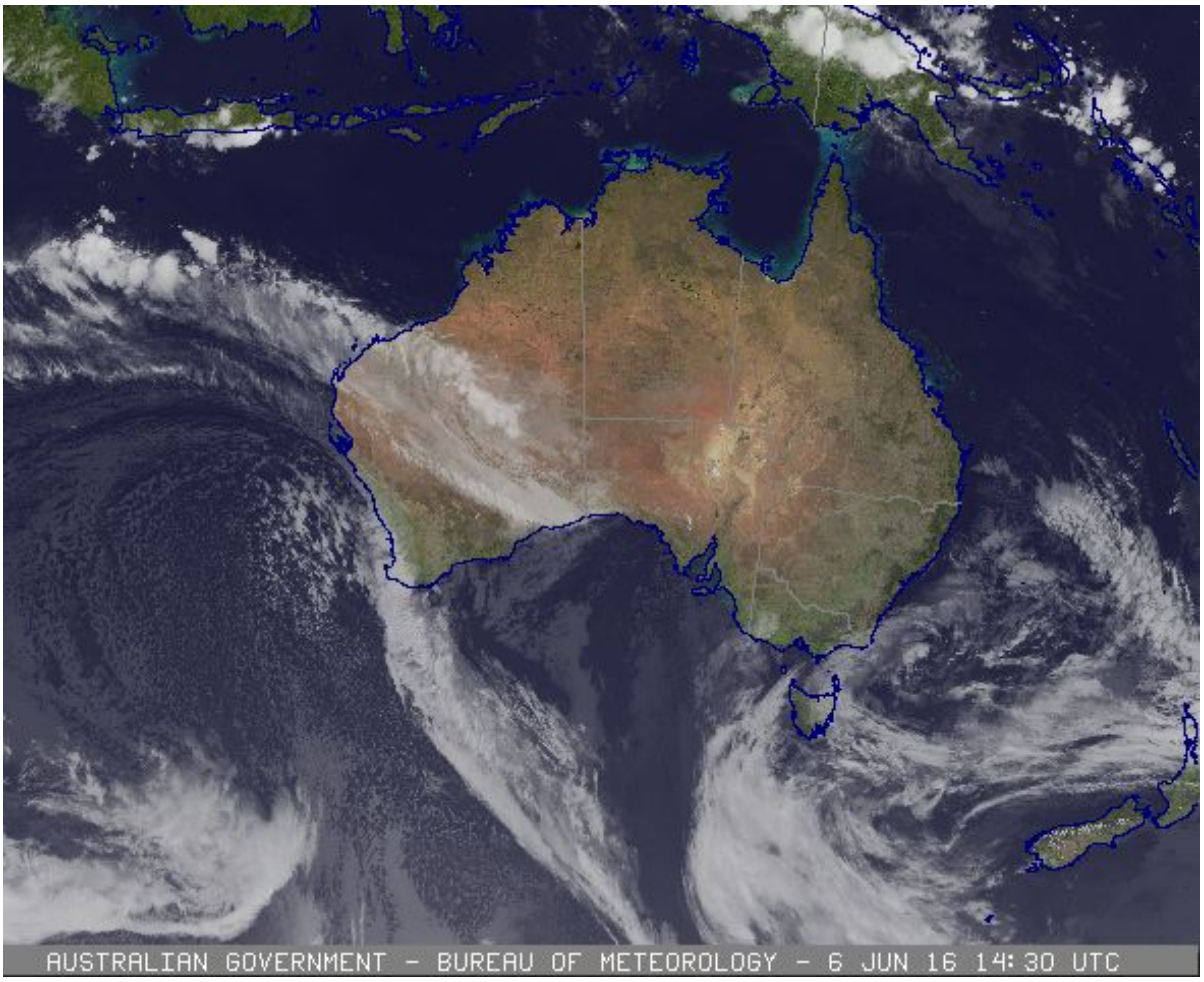


Image courtesy of the Australian Bureau of Meteorology

Meanwhile in south-eastern Australia a deep slow moving depression off the northeast coast produced large amounts of rainfall, 300mm quite widely, and quite widespread flooding over the last few days. There were also gale force winds, very large waves and coastal flooding. Waves as high as 12m (40ft) caused severe erosion at some of Sydney's beaches, leaving some houses at risk of collapse. Some low lying areas were evacuated and there was some travel disruption.

Date Created
June 2016

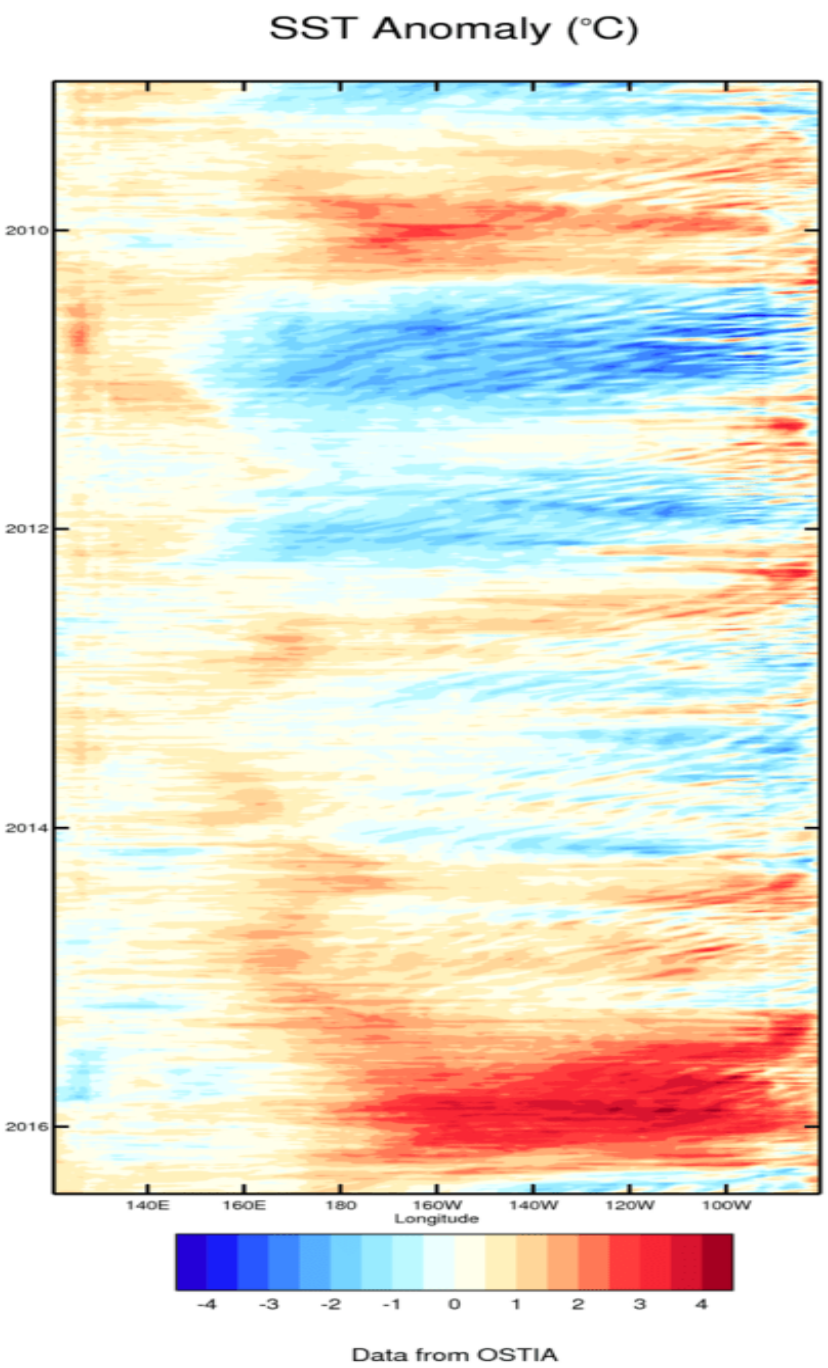
How the moods of the changeable Pacific influences global temperatures

Description

The warm and cool phases of the El Niño Southern Oscillation (ENSO) in the tropical Pacific are part of the largest climatic phenomenon on earth with the greatest impact on our weather.

Since mid-May 2015 until May 2016, ENSO was in its warm phase – El Niño – which produced warmer-than-average conditions across much of the tropical eastern Pacific to the shores of South America.

The latest El Niño has been one of the strongest on record and this event has caused a significant disruption and socio-economic impacts with droughts in India and Africa, forest fires in Indonesia and floods in South America all arising because of the event. In addition its warming influence has extended to the global climate, boosting the global average temperature helping to push 2015 to be the warmest year on record – following 2014 which was also a record-warm year.



This diagram shows the average of sea surface temperature anomalies (difference from the 1961-1990 average) from 5°S to 5°N across the Pacific. Data are from the Operational Sea Surface Temperature and Sea Ice Analysis (OSTIA) analysis. The horizontal axis represents longitude and the vertical axis represents time. The weak 2009-2010 El Niño can be clearly observed as well as the prolonged late-2010-2011 La Nina. At the bottom right of the diagram the currently developing cold anomaly can be seen clearly. This feature might become a La Niña.

The first four months of 2016 have been warmer than any equivalent period in the HadCRUT4 record. Climate experts anticipate that the legacy of the latest El Niño is that 2016 could be another record year for global average temperatures and the very high global temperatures in the first four months of the year seem to bear that out. However, ENSO is now transitioning out of its warm El Niño phase, and it is likely to move towards ENSO's alter ego: La Niña.

If the predicted, cooler-than-average, conditions begin to dominate in the tropical Pacific, it will increasingly tend to suppress global temperatures. This cooling may not arrive sufficiently quickly to bring an end to the run of record-breaking years, however. As Jeff Knight of the Met Office Hadley Centre explains: "The El Niño phase of ENSO may well have run its course for now, but its effects on global temperatures will likely linger for a few months yet, and this, together with the high background level of global warming, could keep the global average temperature high enough to register another record in 2016." Regardless of whether 2016 is another record-breaking year, it will likely be one of the warmest of a handful of years.

One consequence of El Niño is the suppression of the development of hurricanes in the tropical Atlantic, where La Niña conditions can enhance tropical storm activity. Jeff added: "Potentially, the transition from El Niño to La Niña could happen by the peak of the hurricane season."

For about half the time, neither El Niño or La Niña are present and ENSO is said to be in a neutral phase. The latest El Niño is the strongest in nearly two decades and is one of the strongest on record.

To dsicover more about El Niño and La Niña, and to see a video animation of each phase of ENSO, please visit our dedicated page.

Date Created
June 2016

Contrasting weather for Europe this weekend

Description

A developing area of low pressure across central Europe will bring a spell of very unsettled weather across the Alps to the Baltic over the next couple of days, but also introduce increasingly hot conditions to southeast Europe.

Warm and moist air from the central Mediterranean will be drawn northwards across the Swiss-Italian Alps today which is likely to produce some significant rainfall as it rises over the higher ground, in addition to some locally severe thunderstorms. Much of Switzerland and the Italian Lakes are likely to see 50-75mm of rain, but southern slopes of the Alps may see as much as 200-300mm locally, bringing a risk of significant flash flooding and disruption to travel. Faido (TI), Switzerland has already recorded 78mm in 12 hours since rain started to fall on Wednesday night.

The area of low pressure is expected to deepen through Thursday night bringing heavy rain and strong to gale force winds as the system moves northeast across the Czech Republic and Poland on Friday. Whilst this region is not immune to strong winds during the winter, inland gales are very uncommon in the summer and can cause damage and transport disruption due to fallen trees in full leaf. Additionally, some locally severe thunderstorms are likely to develop across a broad region extending from northern Serbia to the Baltic States which bring the threat of damaging wind gusts, large hail and tornadoes.

Through Friday night, this low pressure system continues to move north into the Baltic bringing further heavy rain, scattered thunderstorms and unseasonably strong winds here on Saturday. Following this, there will be some respite across Poland and areas towards the Alps with lighter winds and a scattering of showers.

Meanwhile across southeast Europe, hot air will continue to be drawn north from Africa with temperatures quite widely rising 5-10 Celsius above average over the weekend. This is likely to result in maximum temperatures reaching and locally exceeding 35-40 Celsius across parts of the former Yugoslav Republic of Macedonia, Greece, Bulgaria and western Turkey. Current forecasts suggest that these very warm to hot conditions are likely to persist into next week too, potentially expanding northwards across much of eastern Europe.

Date Created
June 2016

A mixed June so far

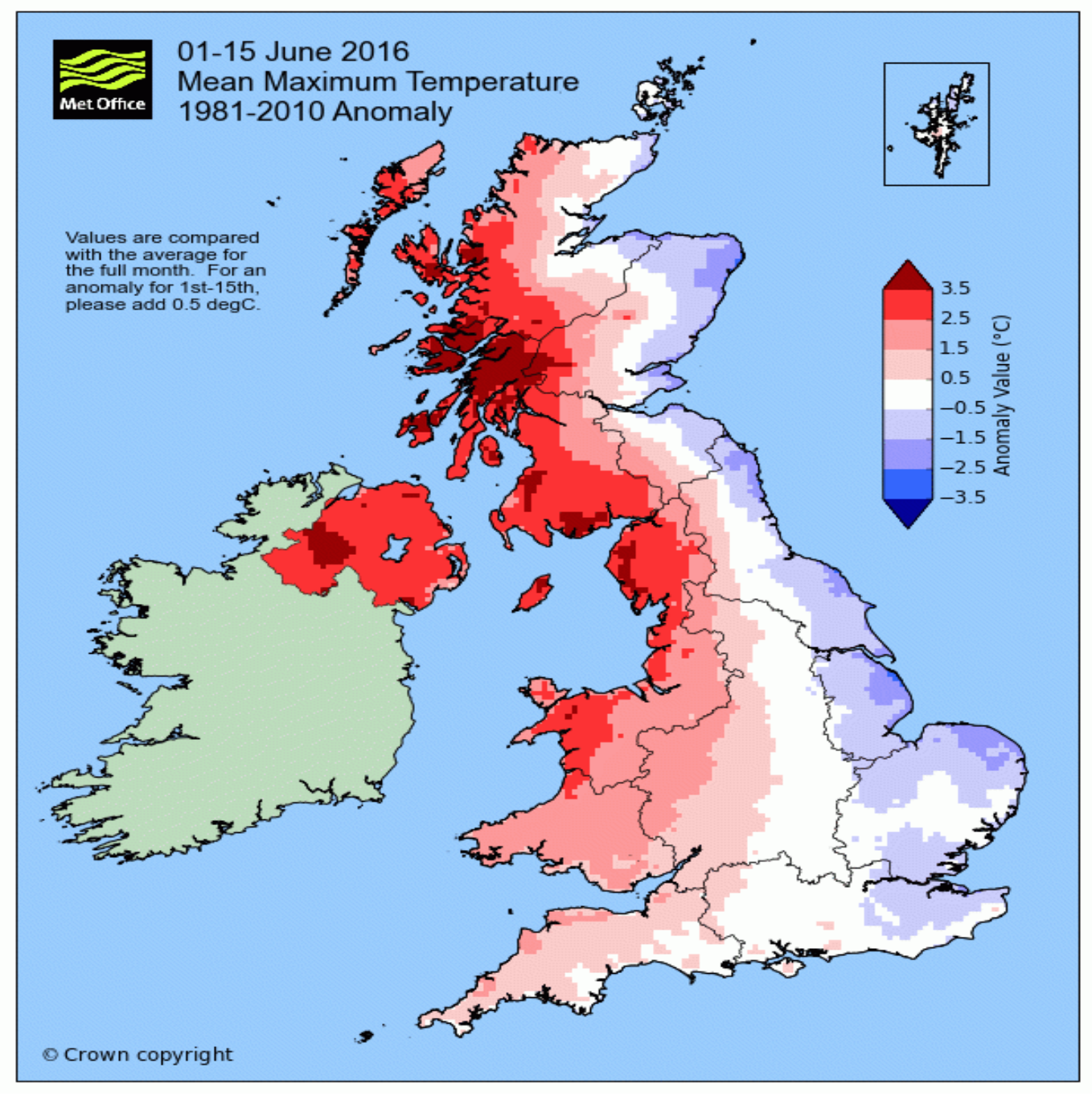
Description

So far in June there has been quite a variation in the weather we have seen. The start of the month brought some warm and sunny weather, especially in the west. However, more recently it has been rather more unsettled with heavy showers for some.

The statistics for 1-15 June show that west has definitely been best for the warmth so far this month. Maximum temperatures here were well above normal, with Argyllshire in western Scotland almost four degrees above the average for June.

Porthmadog in northwest Wales currently holds the record for the highest temperature of the year so far with 27.8C on 5 June, whilst 27.7C was reached at Plockton in northwest Scotland on 10 June.

Meanwhile in the east it has been rather cool by day, due to cloudier conditions and an onshore breeze. As a result, maximum temperatures have been below average in all east-coast counties; by over a degree for both Lincolnshire and East Lothianshire.



Across the UK as a whole, the rainfall total is around average for this stage in the month. However, heavy and thundery showers have given localised large rainfall totals, with some surface water flooding as drains have been unable to cope with the high rainfall rates. Parts of Aberdeenshire, Co Londonderry and numerous places in England are already close to the whole month average, with Leicestershire already having seen 29% above.

Conversely there has been very little rain so far in western Scotland and the Western & Northern Isles, also for the west of Cornwall and the south coast from Dorset eastwards.

Maximum temperature Mean temperature Rainfall

1-15 June 2016	Actual degC	Anom degC	Actual degC	Anom degC	Actual mm	Anom %
UK	18.3	1	14.1	1.1	37.3	51
England	18.9	0.3	14.8	0.8	39.9	65
Wales	19.4	2.1	15.3	2.1	54.6	64
Scotland	16.7	1.6	12.5	1.2	27.2	31
N Ireland	20	3.1	15.3	2.6	44.4	58

Looking ahead and after some further heavy showers today (Friday) there should be a brief respite in the weather over the weekend. However, this will be short lived with unsettled weather expected to arrive through Sunday and into the beginning of next week.

Changeable conditions are then likely through the rest of the month, though temperatures will often be above normal over England and Wales.

You can keep up to date with the latest forecast information via our new Weather App as well as on our forecast pages, Facebook and Twitter sites. Our events page also has forecast weather information for a number of events around the country.

Date Created
June 2016

More thundery downpours for some

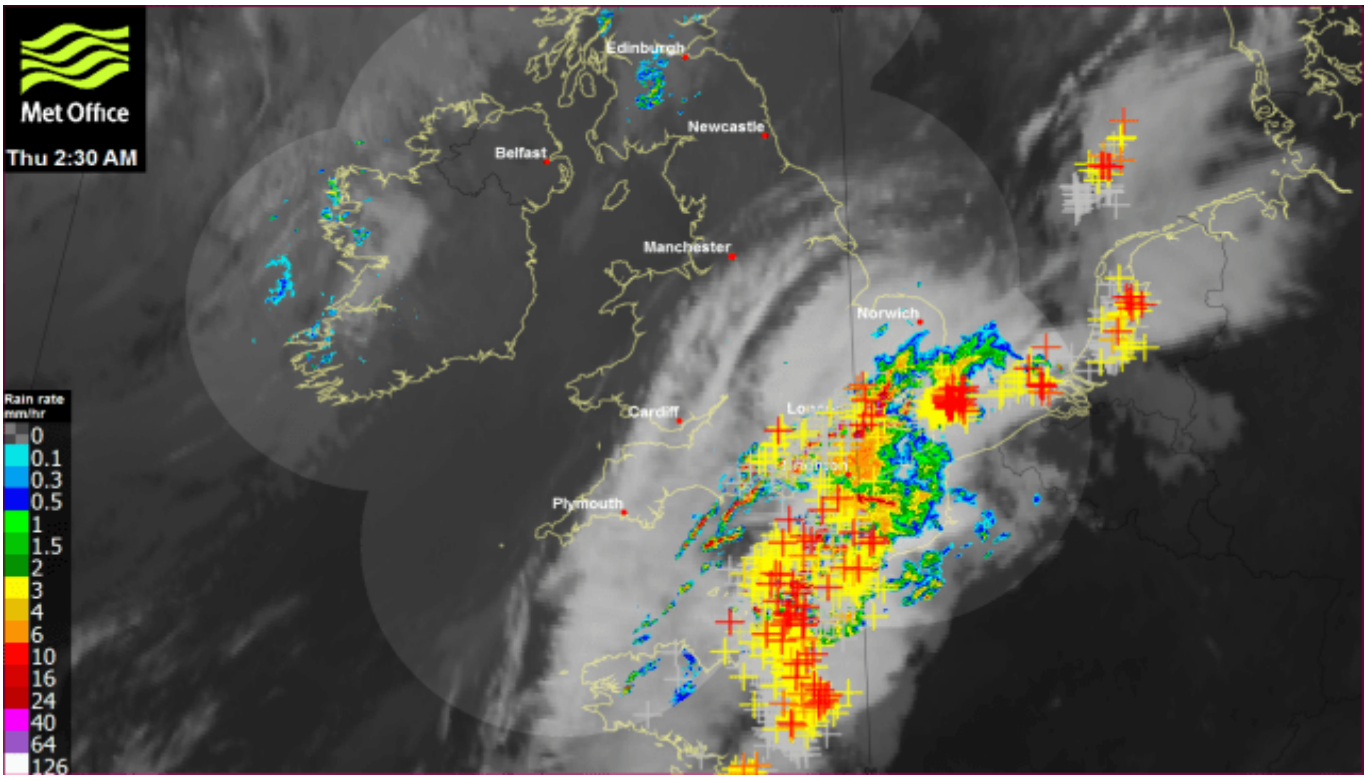
Description

Last night torrential, thundery downpours affected parts of southern and southeast England causing localised flooding and disruption to transport. The table below shows the rainfall totals recorded:

UK rainfall totals 22 June 7pm – 23 June 9am

Site	Area	Rainfall to
SOUTH FARNBOROUGH	HAMPSHIRE	45.6
LONDON, ST JAMES'S PARK	GREATER LONDON	44.4
ALICE HOLT LODGE	HAMPSHIRE	44
WISLEY	SURREY	41.4
HAMPTON W WKS	GREATER LONDON	40.6
ODIHAM	HAMPSHIRE	38
OTTERBOURNE W WKS	HAMPSHIRE	37.8
SHOEBURYNESS, LANDWICK	ESSEX	34.8
KEW GARDENS	GREATER LONDON	34.6
CHARLWOOD	SURREY	30.8

The thunderstorms led to some impressive displays of lightning across these areas with over 20,000 strikes recorded over and close to the south of England during the last 24 hours. Many of these strikes were recorded offshore but still led to some remarkable sights in the sky. The image below shows a snapshot of the rainfall radar and lighting strikes at 3.30am BST this morning (Thursday):



Further thunderstorms are forecast to affect the southeast of England and East Anglia this afternoon and evening and National Severe Weather Warnings are in force. Not everywhere will see the torrential rain, but there is the chance of 30mm in an hour with locally in excess of 50mm or more possible over the course of a few hours leading to possible disruption to travel and localised flooding as well as frequent lightning.

For the most up to date forecast for your area this week, download and use our new App, or follow us on Twitter or Facebook. You can also keep up to date with the #Weatherstory.

Date Created
June 2016

Early June 2016 statistics

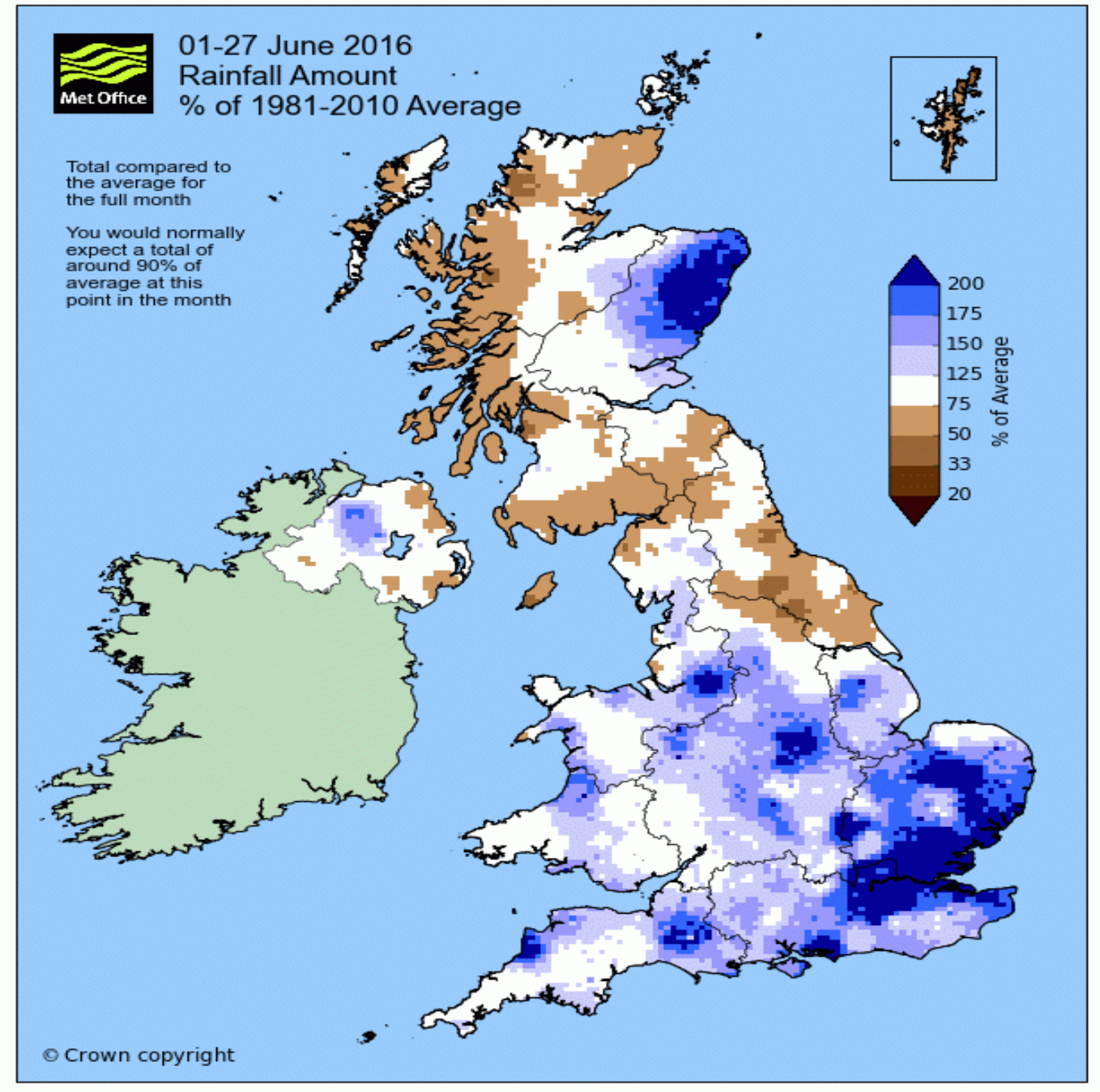
Description

June, the first month of summer meteorologically speaking, has so far delivered a range of weather with some sunny, warm days but also torrential, thundery downpours leading to localised flooding.

Early figures up until 27 June 2016 reflect this mix of weather and also some stark contrasts across the UK.

Statistics up until 27 June reveal most areas of the UK have seen rainfall above the monthly average, but with much of the rainfall falling as showers there are some locations which have had more than twice the June average, whereas other areas have missed much of the rainfall.

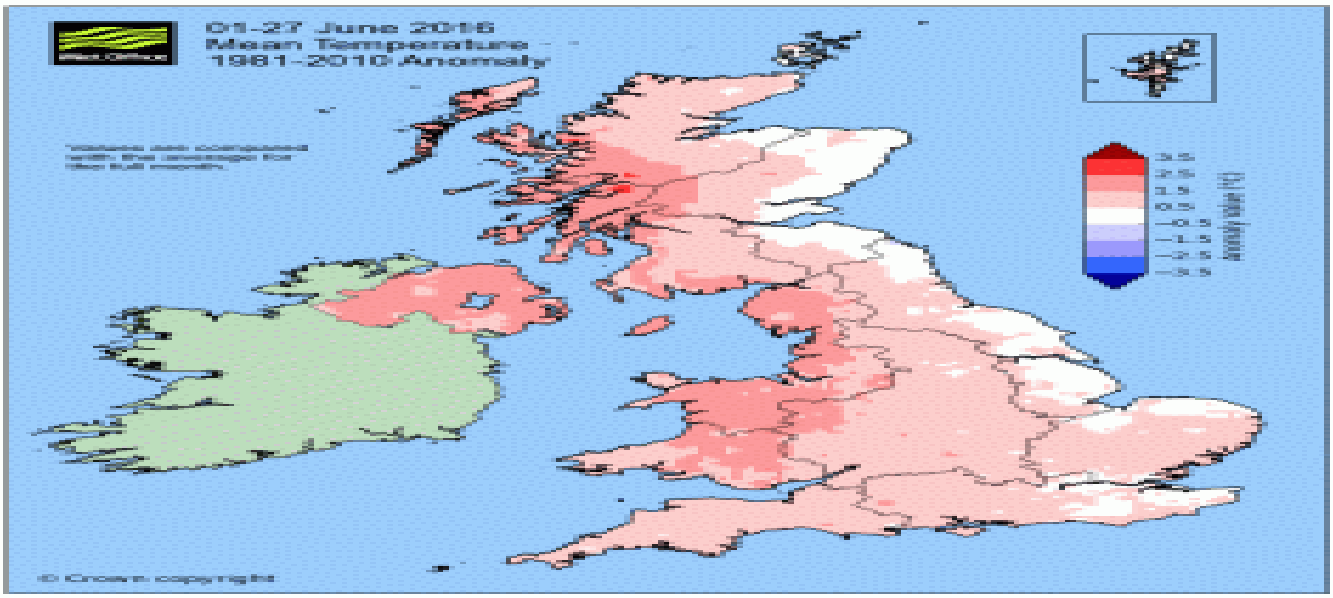
As the rainfall map below shows, away from north-eastern areas of England, much of England and Wales have had a wet month with slow-moving heavy downpours creating a patchwork effect. The counties of Essex and Middlesex are close to recording their wettest June since records began in 1910 with 111.9mm and 112.5mm of rainfall respectively (previous record for Essex 122.5mm in 1958, for Middlesex 123.8mm in 1971).

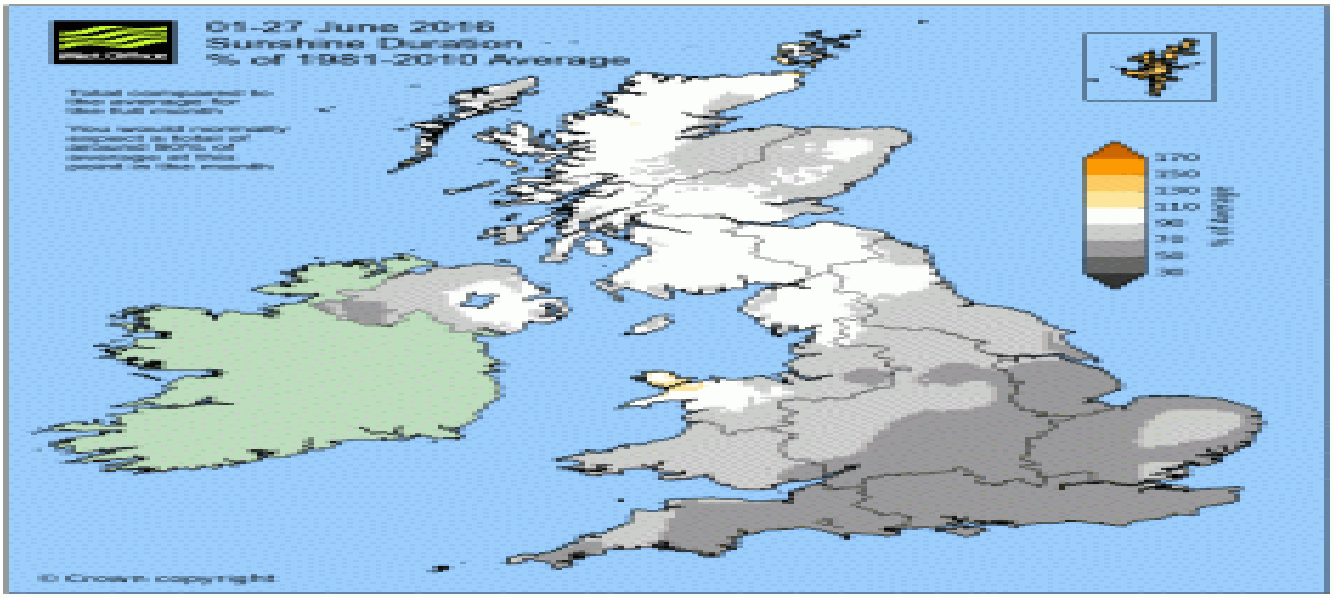


Northern, western and southern Scotland have had a rather dry month with around 70% of the average rainfall for these areas, compared to Aberdeenshire which has been very wet recording 142mm making it close to seeing its wettest June on record (151.7mm in 1948). Kincardineshire (138.3mm) is also close to the wettest June on record (144.5mm in 2012).

Across Northern Ireland as a whole, average rainfall amounts have been recorded, although heavy showers led to locally above average totals in Co Londonderry and Co Tyrone.

Mean temperatures for the UK have been above average by 1C, although regionally this varies from 2C above average in some western parts to around average along much of the east coast. The fine, sunny start to the month when the best of the sunshine and warmth was in the west helped boost these values. Shetland in particular has had a very sunny month so far, whereas eastern and southern





1-27 June 2016	mean temp (°C)		sun (hrs)		rainfall (mm)	
	Actual	Diff from avg	Actual	% of avg	Actual	% of avg
UK	14	1	133	78	83.9	114
England	14.9	0.9	126	69	84.3	136
Wales	14.7	1.6	147	85	104.5	122
Scotland	12.4	1.1	142	95	79.4	89
N Ireland	14.4	1.6	126	84	77.2	101

With June almost over, what weather can we expect for the start of July? At the moment it looks likely that the fairly changeable and rather cool conditions will continue into the start of July with a mix of dry, sunny spells and cloudier periods bringing rain or showers. Towards the end of next week, southern parts of the UK may be slightly drier and feel warmer compared to the north but still with the chance of rain at times.

Keep up to date with the latest outlook, including our 30-day forecast, using our forecast pages and our App and by following us on Twitter and Facebook.

Date Created
June 2016

New Weather Observations Website

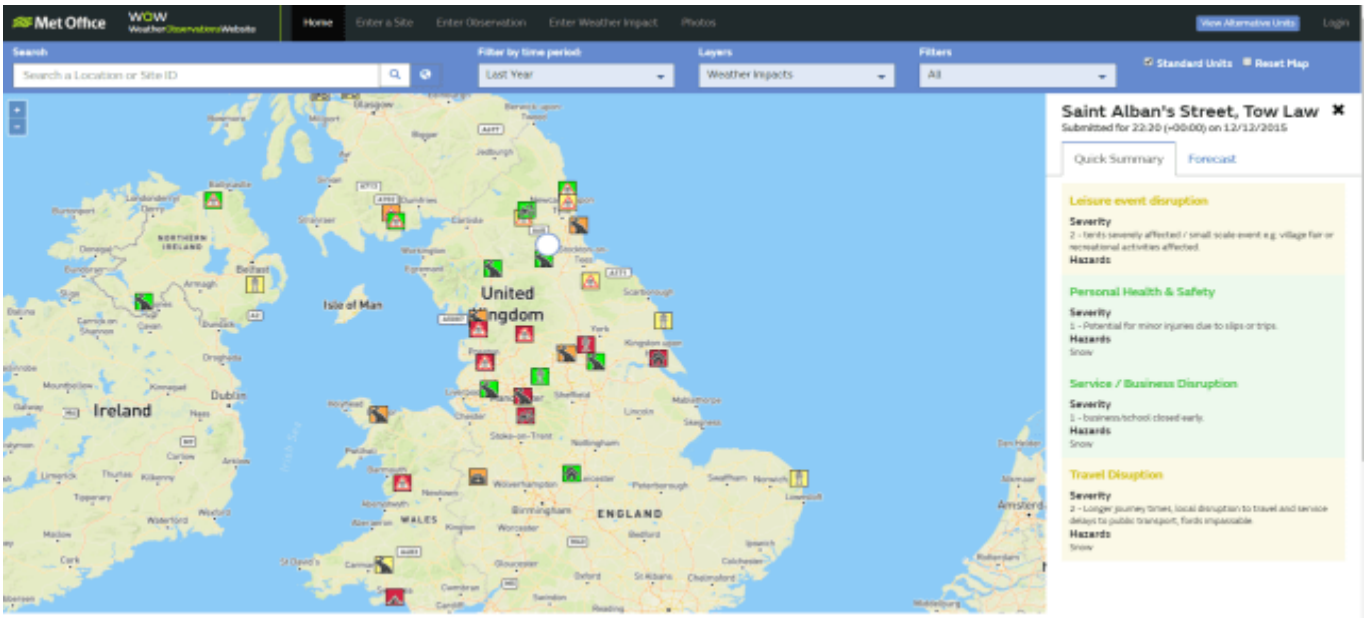
Description

The ‘Weather Observations Website‘ (WOW) is a platform that enables anyone to get involved and submit, share and visualise their weather observations.

WOW was launched in 2011 and since then we’ve received over 850 million observations from 200 countries around the world. The platform is now used by National Meteorological Services around the globe including Australia, New Zealand and the Netherlands.

This month we’ve launched the new WOW website which will make it easier than ever to share experiences of the weather and join in the nation’s favourite conversation. The website is easy to navigate and works on whatever platform it is accessed from: PC, mobile or tablet.

As WOW continues to grow we have the potential to collect exciting new weather observations from all around the world. New technology in the latest release will enable us to capture additional sources of observations, such as those provided automatically from moving platforms i.e. cars.



Weather Impacts

Using WOW, you can send us local observations of weather in your area. These observations can be ones you have recorded on scientific weather stations or just by looking out of the window or sending in a photo. You can share current weather observations from all around the globe, regardless of where they come from, what level of detail or the frequency of reports.

To provide accurate weather forecasts and to understand the impacts of the resulting weather we need high quality, information-rich global observations. The photographs, videos and information collected in WOW will provide us with a powerful tool to create a more visual, localised picture of the weather and its impacts, enabling us to improve forecasting and warning services to all.

You can hear more about WOW by visiting our stand at the Royal Society Summer Science Exhibition (RSSSE) at the Royal Society in central London between 4th-10th July. We invite you to get involved by sharing your weather impact reports and pictures over the summer!

Date Created
June 2016